



## COURSE DATASHEET

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| <b>Semester:</b>               | 2016/17/1                                    |
| <b>Course:</b>                 | Technology of Ceramics and Binding Materials |
| <b>Code:</b>                   | VEMKSIB144G                                  |
| <b>Responsible department:</b> | Institute of Materials Engineering           |
| <b>Department code:</b>        | MKSI   |
| <b>Responsible instructor:</b> | dr. Tamás Korim                              |

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### Course objectives:

Teaching ceramic- and cementitious materials, its technology, characteristic features and applications fields of products made

### Course content:

The history of ceramics. Classification of ceramic materials; Raw materials for ceramics, considerations of their selection; Forming methods of ceramics (slip casting, throwing, jiggering, plastic pressing, turning, semi-dry pressing); Drying and firing: structural changes and product properties; Structural changes and product properties under the firing of ceramics; Driers and kilns: consideration of their selection; Ceramic glazes and colours, decoration techniques; "Classic" products of ceramic industry (brick, roofing tiles, stove tiles, majolica, faience, china); physical and chemical properties; The history of binding materials; Classification of binding materials; Non-hydraulic cementitious materials, their manufacture and applications (plaster, lime); Hydraulic cementitious materials, their manufacture and applications (portland cement, alumina cement); Effect of quality of raw materials on properties of the product; Determination of proper composition of a raw material mixture; Characterization and manufacture of cementitious materials (wet-, semi-dry-, dry technologies); Manufacture of concrete.

### Requirements, evaluation and grading:

### Required and recommended readings:

Somodi-Pálffy-Kámori: Finomkerámiaipari technológia, MK, 1984 Tamás Ferenc: Szilikátipari kézikönyv, MK, Budapest, 1982. Talabér József: Cementipari kézikönyv MK, Budapest, 1982 Déri Márta: Szilikátkémiai technológia, VE jegyzet